

## Remarks

Claims 12 is pending and stands rejected in Examiner's Office Action dated March 20, 2007 under 35 U.S.C. § 103 for obviousness over Norman 6,674,259, in view of BOTBALL.

Applicant notes with appreciation the removal of the previous rejection based on lack of statutory subject matter and acknowledges with appreciation the courtesy of an interview with the Examiner granted on April 4, 2007.

In the interview of April 4, 2007, Applicant's counsel explained the limitations of pending claim 12, pointing out that the claim could be understood as having two parts. The first part of the claim, which runs from the beginning through the phrase "assigning a raw score after each to each alliance based on frequency of achievement of the task by robots of each team in each such alliance," is taught by the prior art. In particular, the first part of the claim has been practiced for years by the FIRST organization described in the first two pages of the application.

Applicant's counsel explained in the interview that the second part of the claim, which begins with "determining a final score for a winning alliance ... by enhancing the raw score of the winning alliance by a function of the raw score of the other alliance" and runs through the end of the claim, defines subject matter that is new.

In the interview, the Examiner said that she felt that the claim reads on the cited prior art. Applicant's counsel pointed out that the office action characterized the cited prior art robotics competition as one wherein "[i]n completing the tasks they are assigned points and at the end the team with the highest point value is declared the winner." Office action, page 2, numbered paragraph 2. Applicant's counsel pointed out that this rejection failed to meet the second part of the claim limitation, namely "determining a final score for a winning alliance ... by enhancing the raw score of the winning alliance by a function of the raw score of the other alliance" and using the scores thus enhanced in ranking the teams. The Examiner said that if this is what the applicant's counsel believed, then applicant should say so in a response. Moreover, she would

need to do further searching on this limitation. Applicant's counsel then said that the claim already has this limitation, so the matter is ripe for consideration right now. The Examiner said she would not drop everything to consider the matter, and that it needed to be addressed by applicant in a response.

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### Discussion

**1. Pending Claim 12 requires “determining a final score for a winning alliance ... by enhancing the raw score of the winning alliance by a function of the raw score of the other alliance” and using the scores thus enhanced in ranking the teams.”**

As discussed above, the plain language of pending claim 12 requires a novel scoring method, in which the winning alliance's raw score is enhanced by a function of the raw score of the losing alliance. This is an extraordinary way of scoring. Certainly in the history of robotics competitions such a scoring system is unique. In virtually all competitions in which a high score determines the winner, the goal is to trounce the adversary. In the present application, however, the winning alliance receives a scoring benefit by making the losing alliance score as close to the raw winning score as possible.

As in the example given by Applicant's counsel to the Examiner in the interview, consider a first scenario in which an alliance with a raw score of 50 defeats an alliance with a raw score of 0. Now consider a second scenario in which an alliance with a raw score of 50 defeats an alliance with a raw score of 49. Under prior art scoring systems, the winning alliance has every reason to seek the first scenario. However, in accordance with the invention defined by claim 12, the winning alliance benefits from the second scenario because its raw score is enhanced by a function of the raw score of the losing alliance, and would have a score, for example, of 99, so that the final score in the second scenario is 99 to 49. Claim 12 requires that teams are ranked according to final scores of alliances in which they participated, so the team in the winning alliance of the second scenario with a final score of 99 would do better than the team in the winning alliance with a final score of 50 in the first scenario. The result is that teams that help their adversaries do better

than teams that do not. Nothing in the art of record discloses or suggests such an extraordinary scoring system.

**2. The Office Action has failed to address key limitations of Claim 12.**

The Office Action cites Norman, U.S. patent 6,674,259 as teaching robotics competitions, and the BOTBALL robotics competition as one wherein “[i]n completing the tasks they are assigned points and at the end the team with the highest point value is declared the winner.” Office action, page 2, numbered paragraph 2. On the basis of these two references, the Office Action maintains that “it would have been [obvious] to one of ordinary skill in the art to combine the teachings of Norman et al. and the well-known BOTBALL to obtain the invention as specified in claim 12.” *Id.* However the Office Action reaches only the first half of claim 12, and says nothing about the remainder of claim 12. The remainder of claim 12 reads as follows:

“determining a final score for a winning alliance in each match, such winning alliance having a raw score exceeding the raw score of the other alliance by enhancing the raw score of the winning alliance by a function of the raw score of the other alliance, so that the winning alliance is thus motivated to cause the other alliance to achieve a high raw score, and the teams of each alliance must work cooperatively;

“setting a final score for the other alliance in each match equal to the raw score achieved by that alliance; and

“ranking the teams based on the final scores achieved in matches in which they participate; “so that the students, by engaging in the contest, are provided with an experience involving science and technology under processes as recited herein that motivate cooperation in the midst of competition for a highest final score on the playing field.”

As discussed in the section 1 above, these are key limitations of the claim, yet the Office Action says nothing about them.

**3. Because the Office Action has failed to address key limitations of Claim 12, it fails to make a *prima facie* case for rejection, the rejection is improper.**

It is the law that a claim cannot be rejected for obviousness unless all the claim limitations are addressed by the Patent and Trademark Office. “To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).” MPEP § 2143.03.

As pointed out in section 2, above, however, the requirements of law have not been satisfied by the present rejection, because the Office Action fails to address key claim limitations. The Examiner states simply that “it would have been [obvious] to one of ordinary skill in the art to combine the teachings of Norman et al. and the well-known BOTBALL to obtain the invention as specified in claim 12.” But the Examiner has not addressed key claim limitations to arrive at this conclusion. If, notwithstanding this fact, the Examiner maintains that it would thus have been obvious to obtain the invention as specified in claim 12, then, pursuant to 37 C.F.R. § 104(d)(2), Applicant hereby requests an affidavit from the Examiner setting forth the basis for Examiner’s assertion that the key limitations described above would have been obvious to one of ordinary skill. See MPEP § 2144.03(C). Applicant requests that such affidavit relate to the state of the art as of the effective filing date of the present application.

Because key limitations of the pending claim have not been addressed by the Office Action, the rejection is improper and must be withdrawn.

### **Conclusion**

For the foregoing reasons, the rejection under 35 U.S.C. § 103 is improper and should be withdrawn. Accordingly, claim 12 is in condition for allowance. Reconsideration of the application and issuance of a notice of allowance are respectively requested.

To facilitate examination of the present application, applicant requests the courtesy of a personal interview with the Examiner and the Supervisory Patent Examiner to discuss the present application prior to action by the Examiner. Please telephone the undersigned so that such an interview may be scheduled.

Applicant believes that no extension of time is required for timely consideration of this response. In the event that an extension has been overlooked, applicant requests that deposit

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account number 19-4972 be charged for any fees that may be required for the timely consideration of this application.

Respectfully submitted,

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